

# HIV PREVENTION



NOW  
more  
than  
EVER,  
our  
WORLD  
depends  
on  
it



## CDC: Fighting HIV, TB, and STDs Worldwide

The Centers for Disease Control and Prevention (CDC), located in Atlanta, Georgia, is the lead public health agency for prevention and control in the United States and is part of the U.S. Department of Health and Human Services. This U.S. government agency also works to prevent and control HIV infection, other sexually transmitted diseases, and tuberculosis in countries around the world.

CDC's National Center for HIV, STD, and TB Prevention (NCHSTP) helps stem the spread of these infectious diseases by conducting research, surveillance, technical assistance for program implementation, and evaluation programs in partnership with local authorities and health agencies around the globe. Information about CDC's international programs in all three areas HIV/AIDS, STDs, and TB is provided in the following pages.

Also included in this Fact Sheet is a description of the *LIFE* Initiative, a major U.S. effort to invest \$100 million in additional funds toward combating the global HIV/AIDS pandemic. A brief outline of CDC's role in this new initiative can be found on page 10.

**HIV/AIDS:** Since the beginning of the HIV/AIDS pandemic, CDC physicians, researchers and technical advisors have worked in sub-Saharan Africa, Asia and the Americas to undertake epidemiological studies of HIV infection and evaluate HIV prevention interventions and treatment methods.

In a number of cases, the studies are carried out through established field stations where CDC and local scientists collaborate on research and program activities. In others, CDC staff are assigned to a particular country's health ministry to serve as technical advisors to their national HIV/AIDS programs. In total, NCHSTP has staff stationed in six countries worldwide.

**TUBERCULOSIS:** In the fight against TB, CDC is a founding partner of the World Health Organization (WHO)-hosted "Stop TB Initiative," a global program to control and prevent tuberculosis, especially in the 22 countries that are responsible for 80 percent of all TB cases reported worldwide.

As a partner in the Stop TB Initiative, CDC works to:

- Ensure that TB patients have access to TB treatment and cure
- Protect vulnerable populations, especially children, from TB and multidrug-resistant TB
- Reduce the social and economic toll that TB exerts on families and communities

CDC is also collaborating with WHO in a multi-country project to implement home-based care for TB patients in rural areas, as well as for those in urban areas who may be too sick to visit caregivers for daily medications. Funded by the U.S. Agency for International Development (USAID), the project, involving eight countries in southern and East Africa, is demonstrating high effectiveness in rural areas but more mixed results in urban sites.

**STDs:** The expanding epidemic of HIV/AIDS has stimulated growing global interest in the prevention and control of other sexually transmitted diseases (STDs). Untreated STDs – syphilis, gonorrhea, chlamydia, chancroid, trichomoniasis and herpes – enhance the infectivity of people with HIV, and HIV-negative people's susceptibility to transmission of the virus. CDC's Division of STD Prevention frequently provides technical expertise to international organizations such as WHO and the World Bank, and by Ministries of Health on epidemiology, behavioral science, and management of STD prevention and control programs.

# AFRICA

## West Africa: Côte d'Ivoire and Mali

### CÔTE D'IVOIRE – Project RETRO-CI

(Retrovirus in Côte d'Ivoire)

Project RETRO-CI is the principal research center of the CDC for the study of HIV infection in Africa. Project staff provide technical assistance and conduct a broad spectrum of epidemiological and laboratory research on HIV/AIDS. Established in 1988, the program is based in the Infectious Disease Service of the Centre Hospitalier Universitaire de Treichville, the largest public hospital in Côte d'Ivoire's largest city, Abidjan. Four resident CDC staff and approximately 100 other national and international staff members are involved in the project. Research has been designed to:

- Define the magnitude of the national epidemic
- Study the modes of transmission and transmissibility of HIV-1 and HIV-2
- Define causes of death in HIV-infected people
- Study the interaction between sexually transmitted diseases (STDs) and HIV
- Study the response to therapy in HIV-infected patients with tuberculosis
- Study the laboratory diagnosis of HIV-1 and HIV-2 infections
- Develop effective interventions to prevent HIV transmission and opportunistic infections
- Evaluate short-course AZT to prevent mother-to-child transmission
- Examine the use of vaginal microbicides in women
- Evaluate STD treatment in female sex workers to prevent HIV infection
- Evaluate the use of cotrimoxazole to prevent opportunistic infection in HIV-infected TB patients

RETRO-CI is a collaborative project between CDC, the Ivorian Ministry of Health and Social Affairs, and the Institute of Tropical Medicine in Antwerp, Belgium.



### Côte d'Ivoire Quick Facts

**HIV prevalence, 1999:** 10.8 percent of adults

**AIDS deaths, 1999:** 72,000 adults and children

**Size:** 322,460 square kilometers, slightly larger than the U.S. state of New Mexico

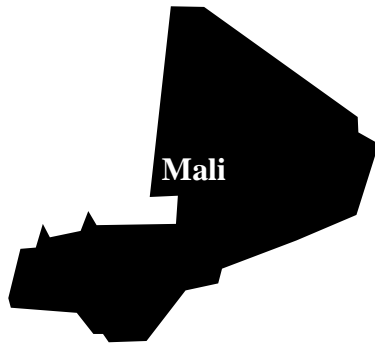
**Population:** 14.5 million

**Life expectancy at birth:** 46 years

**CÔTE D'IVOIRE AND UGANDA – UNAIDS HIV Drug Access Initiative** The United Nations AIDS Program (UNAIDS) developed the HIV Drug Access Initiative, a program aimed at improving access to antiretroviral treatment and other AIDS-related treatments in four pilot countries around the world. In collaboration with UNAIDS and Ministries of Health of host countries, CDC is assisting in the evaluation of this program in Côte d'Ivoire and Uganda.

**MALI** – CDC provides a long-term resident public health advisor to implement the AIDS/STD Awareness and Prevention Project and serves as technical advisor to the National AIDS Control Program. Technical assistance is provided to the Ministry of Health for STD/HIV surveillance, the adoption of national STD treatment guidelines, development of training materials, and

training of national and regional trainers in STD case management. CDC is also expanding collaboration with non-governmental organizations (NGOs) that work with groups at high risk for developing HIV and STDs, such as female sex workers.



### **Mali Quick Facts**

**HIV prevalence, 1999:** 2.03 percent of adults  
**AIDS deaths, 1999:** 9,900 adults and children  
**Size:** 1.2 million square kilometers, slightly less than twice the size of the U.S. state of Texas  
**Population:** 11 million  
**Life expectancy at birth:** 47.5 year

## **East Africa: Uganda and Kenya**

**UGANDA** – CDC provides technical assistance to two major NGOs, which offer HIV counseling and testing and follow-up support services to people infected with HIV and living with AIDS. CDC also conducts research into human herpes virus (HHV-8), the virus associated with Kaposi's sarcoma, both in endemic and HIV-associated forms.

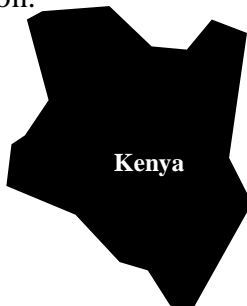
In addition to two – one direct staff member, one through USAID – field staff for technical assistance, CDC supports a resident laboratory virologist for collaborative research on different HIV virus sub-types.



### **Uganda Quick Facts**

**HIV prevalence, 1999:** 8.3 percent of adults  
**AIDS deaths, 1999:** 110,000 adults and children  
**Size:** 236,040 square kilometers, slightly smaller than the U.S. state of Oregon  
**Population:** 21.2 million  
**Life expectancy at birth:** 43 years

**KENYA** – Since 1979, CDC has operated a research station in Kenya in collaboration with the Kenya Medical Research Institute (KEMRI). CDC provides three resident staff, who work with several senior scientists and several hundred Kenyan staff. While the main research focus has been to reduce morbidity and mortality associated with malaria, several studies are examining the interaction of HIV with malaria and other infectious diseases. The project also researches HIV-related blood safety issues, as well as the relationship between barrier contraception and HIV and STD infection.



### **Kenya Quick Facts**

**HIV prevalence, 1999:** 14 percent of adults  
**AIDS deaths, 1999:** 180,000 adults and children  
**Size:** 582,650 square kilometers, about twice the size of the U.S. state of Nevada  
**Population:** 29.5 million  
**Life expectancy at birth:** 47 years

## **Southern Africa: Botswana, Malawi, South Africa, and Zimbabwe**

**BOTSWANA** – CDC currently supports the BOTUSA Project, which researches the TB-HIV link in a country with one of the highest HIV and TB rates in the world. The program is headquartered in Botswana's capital city, Gaborone, which is located near the South Africa border. CDC currently has a medical epidemiologist and a public health advisor assigned to the project, which has been in operation since 1995. In August, another epidemiologist will be added to the team. The project works to:

- Strengthen TB surveillance
- Improve diagnostic services
- Screen for drug quality
- Conduct operations research for TB control
- Identify clinical factors important to ensuring the best TB treatment outcomes

The BOTUSA Project is a collaborative project between CDC, the Botswana Ministry of Health, and the Ministry of Local Government and Lands. The project also collaborates with WHO, UNAIDS, and regional governmental organizations (e.g., Southern Africa Development Community, Southern Africa TB Coordination Initiative).



### **Botswana Quick Facts**

**HIV prevalence, 1999:** 35.8 percent of adults

**AIDS deaths, 1999:** 24,000 adults and children

**Size:** 600,370 square kilometers, slightly smaller than the U.S. state of Texas

**Population:** 1.6 million

**Life expectancy at birth:** 39.9 years

**MALAWI** – CDC assists Malawi health officials in developing HIV/AIDS programs that support maternal health, family planning, and STD intervention and control. CDC also provides technical assistance to the Ministry of Health AIDS Control Program, focusing on HIV/AIDS surveillance, capacity building, planning, implementation, monitoring and evaluation. Currently, a CDC technical advisor resides at the Ministry of Health.



### **Malawi Quick Facts**

**HIV prevalence, 1999:** 16 percent of adults

**AIDS deaths, 1999:** 70,000 adults and children

**Size:** 118,480 square kilometers, slightly smaller than the U.S. state of Pennsylvania

**Population:** 10.7 million

**Life expectancy at birth:** 36.3 years

**SOUTH AFRICA** – CDC consults to the South African government on a broad range of issues concerning HIV/AIDS and TB surveillance and prevention. CDC has a long-term resident medical epidemiologist, who serves as a consultant to the South African Ministry of Health; a public health advisor assigned to the South Africa TB program; and a staff person for the labor initiative. In a joint project with the USAID and the AFL-CIO, CDC also works with labor unions on HIV prevention efforts in South Africa.



#### **South Africa Quick Facts**

**HIV prevalence, 1999:** 19.9 percent of adults

**AIDS deaths, 1999:** 250,000 adults and children

**Size:** 1.2 million square kilometers, about twice the size of the U.S. state of Texas

**Population:** 39.8 million

**Life expectancy at birth:** 54.8 years

**ZIMBABWE** – CDC helps develop laboratory capacity to facilitate surveillance of emerging infectious diseases. To do so, CDC provides a laboratorian to the Zimbabwe government.



#### **Zimbabwe Quick Facts**

**HIV prevalence, 1999:** 25 percent of adults

**AIDS deaths, 1999:** 160,000 adults and children

**Size:** 390,580 square kilometers, slightly larger than the U.S. state of Montana

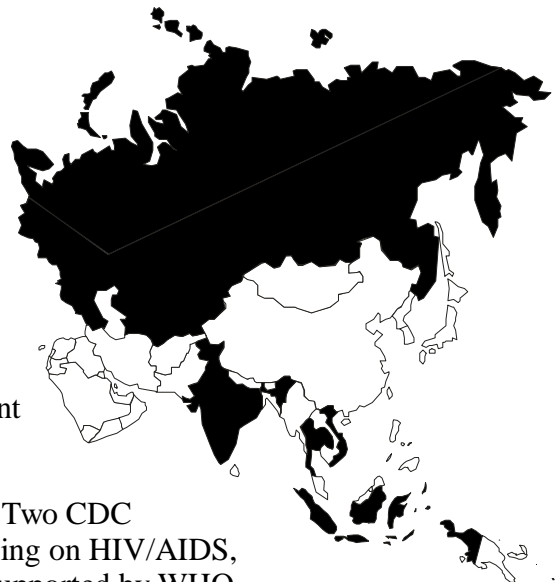
**Population:** 11.5 million

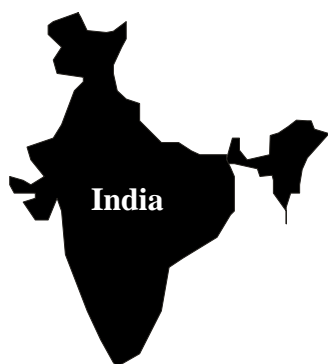
**Life expectancy at birth:** 38.9 years

## **ASIA**

### **The Sub-Continent: India**

**INDIA** – CDC advises the Indian government on HIV/AIDS prevention, including the seven-year bilateral AIDS Prevention and Control (APAC) project in Tamil Nadu, one of the states most severely affected by the epidemic. Preparatory studies are underway for a similar program in Maharashtra state. CDC also works with WHO and the Indian government on World Bank-funded TB activities, including implementation of Directly Observed Short-Course Therapy (DOTS) for TB in a number of Indian states. Two CDC epidemiologists are stationed in New Delhi, one advising on HIV/AIDS, supported by USAID, and the other advising on TB, supported by WHO.





### **India Quick Facts**

**HIV prevalence, 1999:** 0.7 percent of adults

**AIDS deaths, 1999:** 310,000 adults and children

**Size:** 3.3 million square kilometers, about one-third the size of the United States

**Population:** 1 billion

**Life expectancy at birth:** 63.4 years

Expanding DOTS through the revised national TB central program.

### **Southeast Asia:** Indonesia, Thailand and Vietnam

**INDONESIA** – Since 1996, CDC has provided a long-term resident medical epidemiologist and short-term technical assistance to implement the HIV/AIDS Prevention Project (HAPP), which aims to prevent HIV/STD transmission from commercial sex workers to the general population. Technical assistance is provided for STD prevalence surveys, gonococcal antibiotic resistance studies, behavioral surveillance, training in case management and laboratory procedures, and development of a model clinic for monitoring and care of sex workers.



### **Indonesia Quick Facts**

**HIV prevalence, 1999:** 0.05 percent of adults

**AIDS deaths, 1999:** 3,100 adults and children

**Size:** 1.9 million square kilometers, slightly less than three times the size of the U.S. state of Texas

**Population:** 209 million

**Life expectancy at birth:** 62.9 years

**THAILAND** – CDC and the Thai Ministry of Public Health work in partnership to conduct epidemiologic and laboratory research. Six CDC staff are stationed in Thailand, advising on HIV/AIDS and STD initiatives. The joint program, called HIV/AIDS Collaboration (HAC), is based in Bangkok. HAC examines:

- Mother-to-child HIV transmission, including the use of antiretrovirals to prevent transmission
- Heterosexual HIV transmission, including studies of persistently negative partners in discordant couples
- HIV transmission among injection drug users
- HIV transmission via blood
- Molecular epidemiology of HIV in Thailand and Asia
- The clinical pathogenesis of HIV infection
- The interaction of HIV transmission and tuberculosis
- Tuberculosis drug reactivity and resistance
- Evaluation of the efficacy of a preventive HIV vaccine
- Behavioral interventions to prevent HIV transmission

CDC conducts research supported by USAID on the relationship between contraceptive use and HIV. Additionally, CDC supports laboratory DNA analysis of HIV transmission among heterosexual couples



### **Thailand Quick Facts**

**HIV prevalence, 1999:** 2.15 percent of adults  
**AIDS deaths, 1999:** 66,000 adults and children  
**Size:** 514,000 square kilometers, about one-third the size of the United States  
**Population:** 60.8 million  
**Life expectancy at birth:** 69.2 years

**VIETNAM** – CDC has assisted the Vietnamese government in developing and implementing HIV and TB prevention programs for the past 11 years. CDC provides training and technical assistance in surveillance, laboratory procedures, HIV and TB prevention, and occupational safety and health. A resident CDC adviser has been in Vietnam since early 1999 to coordinate CDC activities and assist the government in developing and implementing prevention programs.



### **Vietnam Quick Facts**

**HIV prevalence, 1999:** 0.24 percent of adults  
**AIDS deaths, 1999:** 2,500 adults and children  
**Size:** 329,560 square kilometers, about twice the size of the U.S. state of Wyoming  
**Population:** 78.6 million  
**Life expectancy at birth:** 68.1 years

## **NorthernAsia: Russian Federation**

**RUSSIAN FEDERATION** – Since 1996, CDC has helped local authorities design and conduct surveys of STDs among women, STD health care-seeking behavior, knowledge of HIV and STD prevention, and access to STD treatment. CDC is also collaborating with the Russian government to develop strategies for better STD diagnosis, treatment and prevention among youth and other vulnerable populations in Moscow.



### **Russia Quick Facts**

**HIV prevalence, 1999:** 0.2 percent of adults  
**AIDS deaths, 1999:** 850 adults and children  
**Size:** 17.1 million square kilometers, slightly less than 1.8 times the size of the United States  
**Population:** 147 million  
**Life expectancy at birth:** 65.1 years

## The Americas: Bolivia and Brazil

**BOLIVIA** – Since 1992, CDC has conducted research as part of an initiative to develop a national STD/HIV prevention program. CDC efforts focus on strengthening STD clinical and laboratory services and behavioral interventions for the two major groups at high risk for HIV infection in Bolivia: female sex workers and gay men.



### Bolivia Quick Facts

**HIV prevalence, 1999:** 0.1 percent of adults

**AIDS deaths, 1999:** 380 adults and children

**Size:** 1.1 million square kilometers, slightly less than three times the size of the U.S. state of Montana

**Population:** 8.1 million

**Life expectancy at birth:** 61.4 years

**BRAZIL** – A CDC epidemiologist, working through the Pan-American Health Association, is stationed in Brazil to provide technical assistance for surveillance of HIV, TB and STDs.



### Brazil Quick Facts

**HIV prevalence, 1999:** .57 percent of adults

**AIDS deaths, 1999:** 18,000 adults

**Size:** 8.5 million square kilometers, slightly smaller than the United States

**Population:** 168 million

**Life expectancy at birth:** 64 years

## ***LIFE INITIATIVE***

Introduced in July 1999, the **LIFE** (Leadership and Investment in Fighting an Epidemic) Initiative is a major U.S. effort to address the global AIDS pandemic. The initiative invests an additional \$100 million in U.S. support for India and sub-Saharan African countries working to prevent the further spread of HIV and provide care for those impacted by the disease. African countries part of the initiative include Botswana, Cote d'Ivoire, Ethiopia, India, Kenya, Malawi, Mozambique; Nigeria, Rwanda, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe.



The Initiative builds on the existing investment by the U.S. in HIV/AIDS efforts in Africa and India and involves an unprecedented collaboration between the United States Agency for International Development (USAID), the Department of Health and Human Services (HHS), and the Department of Defense (DOD).

Of the \$100 million invested, \$35 million will be programmed through CDC, the lead agency for HHS, with collaboration from Health Resources and Services Administration (HRSA).

The major areas of focus will include:

- **Primary Prevention** will be supported by providing technical assistance and training on voluntary counseling and testing, reducing mother-to-child HIV transmission, STD management, social marketing, behavior change, public and private partnerships, HIV prevention for youth and blood safety systems.
- **Capacity and Infrastructure Development** will be strengthened in all 15 countries targeted by the Initiative by enhancing surveillance systems, strengthening laboratory capacity, enhancing program management skills, training of public health workers and by developing new initiatives to use their data to inform prevention and treatment programs and measure their impact. Surveillance information will not only be used to allocate prevention and treatment programs to the regions and populations most affected, but will also be used to increase awareness and support for HIV prevention in the countries involved.
- **Community- and Home-Based Care and Treatment** will be supported through technical assistance and training. In addition, guidelines, training materials and education curricula will be jointly developed for the treatment of tuberculosis and other HIV-related opportunistic infections, as well as for palliative and other supportive services. This program will work with communities to help treat opportunistic infections that are killing the majority of AIDS victims in developing countries. Currently, TB is the number one killer of people living with AIDS in Africa. CDC in collaboration with WHO is directly involved with implementing DOTS programs to treat TB patients. Innovative use of antiretroviral therapy will also be used when appropriate.

With adequate funding, over the next three years, the LIFE Initiative is expected to accomplish the following objectives:

- Decrease HIV incidence in 15- to 24-year-olds
- Decrease perinatal infections
- Decrease reported STD prevalence in men and women
- Build community support for households caring for children affected by AIDS
- Help district/provincial governments implement care and support activities
- Assist in establishment of surveillance systems in all target countries

